

Safety Data Sheet

#20788859 · Full 16-section SDS

According to Regulation (EC) No 1907/2006
According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Phleomycin	11006-33-0	C51H75N17O21S2	10	09 Sep 2026

SECTION 1

Identification

1.1 Product identifier

Product name Phleomycin

CAS number 11006-33-0

EC / EINECS number 634-572-3

Chemical formula C51H75N17O21S2

Molecular weight 1326.37

SMILES CC1=C(N=C(N=C1N)C(CC(=O)N)NCC(C(=O)N)N)C(=O)NC(C(C2=CN=CN2)O[C@H]3[C@@]([C@H]([C@@H]([C@@H](O3)CO)O)O)(C)O[C@H]4[C@@H]([C@]([C@H](C(O4)CO)O)(C(=O)N)O)O)C(=O)NC(C)C(C(C)C(=O)NC(C(=O)C)C(=O)NCCC5=NC(CS5)C6=NC(=CS6)C(=O)N)O

1.2 Relevant identified uses of the substance or mixture and uses advised against

For research and development. Laboratory chemicals. Manufacture of substances. Not suitable for human or veterinary purposes.

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Acute Tox. 4; H302

2.2 Label elements



WARNING

CODE	HAZARD STATEMENT
------	------------------

H302	Harmful if swallowed
------	----------------------

CODE	PRECAUTIONARY STATEMENT
------	-------------------------

P280	Wear protective gloves/protective clothing/eye protection/face protection
------	---

P301+312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
----------	---

2.3 Other hazards

No components considered PBT/vPvB or endocrine disruptors at $\geq 0.1\%$ concentration

SECTION 3

Composition / information on ingredients

3.1 Substances

Name	Phleomycin
------	------------

CAS number	11006-33-0
------------	------------

EC number	634-572-3
-----------	-----------

Concentration / purity	~100%
------------------------	-------

Classification according to Regulation (EC) No 1272/2008	Acute Tox. 4; H302
--	--------------------

Hazard statements	H302
-------------------	------

Acute toxicity estimate (ATE)	No data available
-------------------------------	-------------------

Impurities / stabilising additives	Not applicable
------------------------------------	----------------

SECTION 4

First-aid measures

4.1 Description of first aid measures

Inhalation	Fresh air
Skin contact	Remove contaminated clothing; rinse skin with water/shower
Eye contact	Rinse with plenty of water; remove contact lenses
Ingestion	Drink water (two glasses max); consult physician

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Water, foam, CO₂, dry powder

Unsuitable extinguishing media Not specified

5.2 Special hazards arising from the substance or mixture

Hazardous combustion gases/vapors possible; combustible

5.3 Advice for firefighters

Use self-contained breathing apparatus; prevent water contamination

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation/dust contact; ensure ventilation; evacuate danger area

6.2 Environmental precautions

Do not let product enter drains

6.3 Methods and material for containment and cleaning up

Cover drains; collect spills; dispose properly; avoid dust generation

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Wash skin thoroughly after handling; avoid eating/drinking/smoking

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature 2 to 8 °C

Conditions for safe storage (incompatibilities) Tightly closed, dry; incompatible with strong oxidizing agents

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits (OEL / WEL) *Not applicable*

DNEC/PNEC data *Not applicable*

8.2 Exposure controls

Eye / face protection Safety glasses
Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.

Skin / hand protection Gloves: Nitrile Rubber, 0.11mm (480 mins).

Respiratory protection Dust mask (FFP2/FFP3)
Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

Other protection *No data available*

Environmental exposure controls *No data available*

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state Powder
DERIVED FROM: LITERATURE

Colour Light blue
DERIVED FROM: LITERATURE

Odour Not known
DERIVED FROM: LITERATURE

Melting / freezing point	<i>Not applicable</i>
Boiling point	<i>Not applicable</i>
Flammability	<i>No data available</i>
Lower and upper explosion limit	<i>No data available</i>
Flash point	<i>Not applicable</i>
Auto-ignition temperature	<i>Not applicable</i>
Decomposition temperature	<i>No data available</i>
pH	<i>Not applicable</i>
Acidity	<i>Not applicable</i>
Kinematic viscosity	<i>No data available</i>
Solubility	<i>Not applicable</i>
Partition coefficient n-octanol/water (log value)	<i>Not applicable</i>
Vapour pressure	<i>Not applicable</i>
Density (g/mL)	1.83 g/mL DERIVED FROM: LITERATURE
Relative vapour density	<i>No data available</i>
Particle characteristics	<i>No data available</i>

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Not applicable

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous combustion gases/vapors possible in fire. See section 5

SECTION 11

Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (LD50 / LC50) LD50 Oral - Rat: 649 mg/kg (Behavioral: Altered sleep time, convulsions, dyspnea)

Skin corrosion / irritation *No data available*

Eye corrosion / irritation *No data available*

Respiratory / skin sensitisation *No data available*

Carcinogenicity *No data available*

Mutagenicity Mutagenic effects observed in human leukocytes and mouse ovary (subcutaneous) via cytogenetic analysis

Reproductive toxicity *No data available*

STOT (single / repeated exposure) *No data available*

Aspiration hazard *No data available*

11.2 Information on other hazards

This product does not contain any known or suspected endocrine disruptors.

SECTION 12

Ecological information

12.1 Toxicity

Not applicable

12.2 Persistence and degradability

Not applicable

12.3 Bioaccumulative potential

Not applicable

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Endocrine disrupting properties

See Section 11.2.

12.7 Other adverse effects

No data available

SECTION 13

Disposal considerations

13.1 Waste treatment methods

Dispose of in accordance with local/national regulations

SECTION 14

Transport information

14.1 UN number or ID number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Special precautions for user Not applicable

Transport category Not applicable

Tunnel code Not applicable

Packing instruction (ADR) Not applicable

Packing instruction (IMDG) Not applicable

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15

Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Substance-specific regulations (e.g. licences) No data available

REACH code Y110

ECHA notification Not applicable

15.2 Chemical safety assessment

Not required

SECTION 16

Other information

Revision notes / other information

Not applicable

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.